

United States Patent [19]

Iwatsuki et al.

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[54] **SILK-FIBROIN AND HUMAN-FIBRINOGEN
ADHESIVE COMPOSITION**

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[58] Field of Search 106/124; 530/353;
424/101

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,414,976 11/1983 Schwartz et al. 106/124

OTHER PUBLICATIONS

Chem. Abstract 54:15,855b, Muller, 1958.

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[57] **ABSTRACT**

The present invention provides a novel adhesive which contains a mixture of human-fibrinogen and silk-fibroin and which is suitable especially for use in surgery. The mixing ratio of silk-fibroin to human-fibrinogen is 5 to 90, preferably 20 to 70% by weight.

4 Claims, 1 Drawing Sheet

